

AMENDMENT

This listing of claims will replace all prior versions and listings of claims in the Application. Please amend the claims as follows:

Listing of Claims:

1. (Currently amended) A bio-stable hydrogel for use as an endoprosthesis, the hydrogel ~~comprising~~ consisting essentially of:
(a polyacrylamide which includes) a polymer of acrylamide cross-linked with methylene bis-acrylamide, wherein the acrylamide and methylene bis-acrylamide are combined in a molar ratio of 150:1 to 1000:1 and wherein the hydrogel comprises about 0.5 to less than 3.5% of polyacrylamide by weight, based on the total weight of the hydrogel, and water or an aqueous solution, wherein the hydrogel comprises less than 50 ppm of acrylamide and methylene bis acrylamide monomers; and wherein the hydrogel has an elasticity module from about 10 to 700 Pa and a complex viscosity from about 2 to 90 Pas.
2. (Previously presented) A hydrogel according to claim 1 or 51 wherein the hydrogel comprises at least 95% by weight water or aqueous solution based on the total weight of the hydrogel.
3. (Previously Cancelled)
4. (Previously Cancelled)
5. (Previously Presented) A hydrogel according to claim 1, comprising at least 1% by weight of the polyacrylamide, based on the total weight of the hydrogel.
6. (Previously Cancelled)
7. (Previously presented) A hydrogel according to claim 1, which has a complex viscosity from about 5 to 80 Pas.
8. (Previously presented) A hydrogel according to claim 1, which has an elasticity module of not less than 20 Pa.
9. (Previously presented) A hydrogel according to claim 1, which has an elasticity module from about 35 to 480 Pa.

10. (Previously presented) A hydrogel according to claim 1, which has a cross-linking density of about 0.2 to 0.5%.

11. (Previously presented) A hydrogel according to claim 1, wherein the acrylamide and methylene bis-acrylamide are combined in the molar ratio of from 175:1 to 800:1.

12. (Previously presented) A hydrogel according to claim 1, for use as an implantable endoprosthesis.

13-43. (Previously Cancelled)

44. (Previously presented) A hydrogel according to claim 1, for use as an injectable endoprosthesis.

45. (Previously presented) A hydrogel according to claim 1, wherein the complex viscosity is from 6 to 40 Pas.

46. (Previously presented) A hydrogel according to claim 1, for use in an implantable endoprosthesis comprising a silicone-based envelope.

47. (Previously presented) A hydrogel according to claim 1 further comprising cells for cellular engraftment.

48. (Previously presented) A hydrogel according to claim 1 which comprises 0.5 to 3.47% of the polyacrylamide by weight, based on the total weight of the hydrogel.

49. (Previously presented) A hydrogel according to claim 1 which comprises 0.5 to 3.4% of the polyacrylamide by weight, based on the total weight of the hydrogel.

50. (Previously presented) A hydrogel according to claim 1 which comprises 0.5 to 3.3% of the polyacrylamide by weight, based on the total weight of the hydrogel.

51. (Previously presented) A bio-stable hydrogel for use as an endoprosthesis, the hydrogel comprising:

a polyacrylamide which consists essentially of a polymer of acrylamide cross-linked with methylene bis-acrylamide, wherein the acrylamide and methylene bis-acrylamide are combined in a molar ratio of 150:1 to 1000:1 and wherein the hydrogel comprises about 0.5 to less than 3.5% of the polyacrylamide by weight, based on the total weight of the hydrogel, and water or an aqueous solution,
wherein the hydrogel comprises less than 50 ppm of acrylamide and methylene bis acrylamide monomers; and wherein the hydrogel has an elasticity module from about 10 to 700 Pa and a complex viscosity from about 2 to 90 Pas.

52. (Previously presented) A bio-stable hydrogel for use as an endoprosthesis, the hydrogel comprising:

about 0.5% to less than 3.5%, based on the total weight of the hydrogel, of a polymer consisting essentially of polyacrylamide cross-linked with methylene bis-acrylamide, wherein the acrylamide and methylene bis-acrylamide are combined in a molar ratio of 150:1 to 1000:1, and at least 95% water or an aqueous solution,

wherein the hydrogel comprises less than 50 ppm of acrylamide and methylene bis acrylamide monomers; and wherein the hydrogel has an elasticity module from about 10 to 700 Pa and a complex viscosity from about 2 to 90 Pas.

53. (Previously presented) A hydrogel of claim 1, 51 or 52, wherein the hydrogel is substantially free of any other polymeric content.